

Remarks

The Examiner's reconsideration of the application is urged in view of the amendments above, attachments hereto, and comments which follow.

Taking the matters raised by the Examiner in turn, the election is confirmed, and except for the elected claims, the remaining claims are identified as withdrawn.

The Examiner refers to an Information Disclosure Statement in numbered section 2 of the Office Action. No such document was filed with the Patent and Trademark Office, and perhaps there is confusion with what was provided by the International Bureau. Since the references are in the file, the appropriate Form PTO-1449 is submitted herewith.

As required by the Examiner, a new title is set forth above. Also, an abstract, always forming part of the International Application, is now appended hereto, set forth on a separate page.

The Examiner considers that claim 23 is anticipated by US 5,460,384 (Seidel et al). It is submitted that amended claim 21 is both new and non-obvious in view of this reference.

In Seidel et al, there is a target wheel 18 and binary dots are provided on the rear of this wheel and detected by photodetectors of wheel position sensor board 46 (column 4 lines 38 to 47).

There is no "position encoder" in the form of a "processor" in Seidel et al that "maintains a cyclical count in a counter". Instead a binary value is read by sensor board 46. Nor does the sensor board 46 determine whether an article detected by a sensor is within a target area on the target field with reference to such a count value. In Seidel et al, the values are simply read off the sensors.

It will be appreciated that the approach of the present invention gives much greater accuracy than Seidel et al. In Seidel et al, there are only 5 reflective sensors detecting respective dots of a binary pattern. A binary pattern of 5 dots can only express numbers in the range 00000 to 11111, or in decimal 0 to 31. Since in Seidel et al dots need to be read, the resolution is limited by the size and minimum spacings of groups of dots expressing numbers. In contrast, there is no such limitation in the present invention since the count is maintained internally of the processor rather than being read off a wheel. In the example, a single quadrant is divided into 3150 interrupts (page 11), which gives a hugely better resolution than would be possible using the direct reading of Seidel et al.

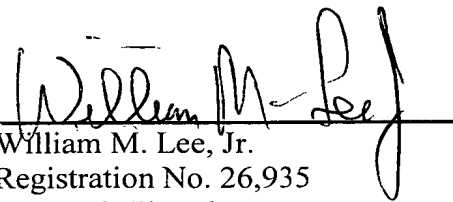
The Examiner suggests with regard to claim 23 that the operation of reading the position of the wheel is the application of a correction factor. Amended claim 21 requires the correction to be applied to the count. The reading of the wheel cannot be both the cyclical count and the correction factor to that cyclical count, and both are required by claim 21.

In view of the foregoing, it is submitted that claim 21, as amended, distinguishes from and is allowable over the cited prior art. As the remaining claims depend therefrom, including new claim 33, it is submitted that those claims are allowable, as well.

Further and favorable reconsideration by the Examiner is urged.

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Respectfully submitted,


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